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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,676	10/08/2003	Daniel Peter Ivkovich JR.	125054/11901 (21635-0110)	7687
31450 7590 10/31/2007 MCNEES WALLACE & NURICK LLC 100 PINE STREET P.O. BOX 1166 HARRISBURG, PA 17108-1166			EXAMINER MAZUMDAR, SONYA	
			ART UNIT 1791	PAPER NUMBER
			MAIL DATE 10/31/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/681,676	Applicant(s) IVKOVICH ET AL.	
	Examiner Sonya Mazumdar	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/8/2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. In view of the appeal brief filed on July 18, 2007, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

- (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,
- (2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:


PHILIP TUCKER
PRIMARY EXAMINER
SPE ART UNIT 1791

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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3. Claims 23 and 24 are rejected under 35 U.S.C. 102(b) as being unpatentable by Ross (US 5,830,529).

Ross discloses method of applying coating to a substrate. The method includes providing a base, i.e. deposition substrate, constructed from disposable material such as water transfer type paper, which would dissolve in water. The base is coated with such materials that are metallic, reflective, holographic, or retroreflective, i.e. an optical coating, and includes a release coating, i.e. release system, such as a water slide coating (column 9, line 66 - column 10, line 3; column 5, lines 41-63; column 18, lines 47-67; column 19, line 30; column 28, lines 38-39). An adhesive, i.e. bonding element, is applied to one surface of the coating for attachment of the coating from a base to a final or intermediate surface by heat and pressure (column 43, lines 35-43). If the coating is applied to the intermediate surface, the intermediate surface is used to reverse the orientation of the coating during transportation or transposition onto the final surface, and the intermediate surface includes another release system, such as a charged plate or a release coating, with the final surface includes brass, plaques, glass, or brick (column 23, lines 19-23; column 38, lines 1-22). It should be noted that Ross teaches two different release systems to accomplish the step of transferring an optical coating.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 4 through 9, and 15 rejected under 35 U.S.C. 103(a) as being unpatentable over Ross in view of Withington et al. (GB 2289866)

With respect to claims 1, 4, 5, 6, 7, and 15, Ross discloses method of applying coating to a substrate. The method includes providing a base, i.e. deposition substrate, constructed from disposable material such as water transfer type paper, which would dissolve in water. The base is coated with such materials that are metallic, reflective, holographic, or retroreflective, i.e. an optical coating, and includes a release coating, i.e. release system, such as water slide coating (column 9, line 66 - column 10, line 3; column 5, lines 41-63; column 18, lines 47-67; column 19, line 30; column 28, lines 38-

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39). An adhesive, i.e. bonding element, is applied to one surface of the coating for attachment of the coating from a base to a final or intermediate surface by heat and pressure (column 43, lines 35-43). If the coating is applied to the intermediate surface, the intermediate surface is used to reverse the orientation of the coating during transportation or transposition onto the final surface and the intermediate surface includes includes another release system, such as a charged plate or a release coating, with the final surface includes brass, plaques, glass, or brick (column 23, lines 19-23; column 38, lines 1-22). It should be noted that Ross teaches two different release systems to accomplish the step of transferring an optical coating.

Ross teaches that coatings, known as release coatings, may be used (column 38, lines 21-22). However, Ross does not specifically teach a first release coating on a base which dissolves in water, however, Withington et al. teach using a backing with a water-soluble coating in a transfer process in applying a decal (page 3, 1st paragraph; page 4, 3rd paragraph).

It would have been obvious to one having ordinary skill in the art to use a water-soluble coating, such as Withington et al. taught, and one would have been motivated to do so to facilitate complete separation of an optical coating from a base by applying water.

With respect to claims 8 and 9, Ross teaches the intermediate surface includes transfer tape (column 38, lines 8-10). According to Applicant's specification, a release-and-transfer structure may be a polymeric releasable adhesive tape (paragraph 0013).

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6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ross in view of Withington et al., as applied to claim 1 above, and further in view of Duchane et al. (US 4,481,999)

Ross in view of Withington et al. fail to teach an organic deposition substrate. Duchane et al disclose a method of forming a thin metal foil on a polyvinyl alcohol film and the alcohol film and metal coating are immersed together in a water bath to dissolve the alcohol film (column 4, lines 37-51; column 5, 34-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a polyvinyl alcohol substrate as taught by Duchane et al. to allow easier dissolution of itself for removal against the optical coating and to provide a 3-dimensional optical coating of any desired shape against the article (column 2, lines 10-12).

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ross in view of Withington et al., as applied to claim 1 above, and further in view of Wilhelm et al. (US 5,989,377)

The teachings of claim 1 are as described above.

Ross in view of Withington et al. fail to teach applying an aluminum layer as a release system. Wilhelm et al. teach a transfer method where an aluminum layer is vacuum deposited to act as a release layer (column 6, lines 31-33).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply an aluminum layer as a release system as Wilhelm et al. taught because the aluminum layer would provide the underlying film with a

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substantially contaminant-free surface when the aluminum layer is removed (column 6, lines 23-26).

8. Claims 10 through 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ross in view of Withington et al., as applied to claim 1 above, and further in view of Conolly (US 4,623,087).

The teachings of claim 1 are described as above.

With respect to claim 10, Ross in view of Withington et al. does not teach using a device substrate of a gas turbine engine. Conolly discloses a method of applying an optical coating by ways of a carrier to articles such as a turbine blade or combustion chamber for a gas turbine engine (column 2, lines 7- 10 and lines 36-39; column 3, lines 38-42)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide an optical coating to a component of a gas turbine engine as disclosed by Conolly to provide a thermal barrier material to the engine components (column 2, lines 11-14).

With respect to claims 11 and 12, although Conolly does not expressly teach furnishing a new-make or repaired article's surface to receive an optical coating, where Applicant's specification defines a new-make article as one that has not previously been in service, Conolly teaches applying an optical coating to an article, which may be newly manufactured or repaired, to achieve a certain characteristic. And therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to apply an optical coating to an article as Conolly taught to the method disclosed by Ross.

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9. Claims 13, 16-18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ross in view of Withington et al., as applied to claim 1 above, and further in view of Hankland (U.S. 4,407,685).

The teachings of claim 1 are as described above.

Ross in view of Withington et al. do not specifically teach heating and pressing to affix the coating to the article using an autoclave. Hankland teaches a method of transferring an optical coating, which includes placing an composite of a carrier member with the optical coating and the article to be coated into an autoclave with an adhesive element as a component of the article, then heating and pressing to cure the adhesive (column 3, lines 16-22, lines 43-46, and lines 54-61; column 4, lines 25-33).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide use an autoclave to affix a metal coating with heating and pressing as disclosed by Hankland to provide a method of coating surface such as curved surfaces in a one step process (column 1, lines 54-57).

10. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ross in view of Withington et al., as applied to claim 1 above, and further in view of Alexander (U.S. 3,654,016).

Ross in view of Withington et al. do not teach affixing the coating to the article with ironing. Alexander teaches a method of adhering foil to a surface, which includes providing a foil, i.e. optical coating, on a carrier member and ironing the foil onto the substrate with heat and pressure and removing the carrier member (column 2, lines 53-60).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply a coating on a carrier member to an article by ironing as taught by Alexander to provide method of applying foil to an article with greatly reduce waste (column 1, lines 54-56).

11. Claims 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ross in view of Withington et al., as applied to claim 1 above, and further in view of Oliva (U.S. 4,153,494).

Ross in view of Withington et al. do not teach bonding the adhesive to the article surface and thereafter bonding the optical coating to the adhesive. Oliva discloses a method of metallizing surfaces, which includes applying an adhesive or cement to either the surface of the article, or the surface of the metallic coating (column 2, lines 15-20, lines 24-28, and lines 42-51).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to applying the adhesive to the surface of the article as disclosed by Oliva as an alternative and equivalent method of bonding an optical coating to an article.

12. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ross in view of Withington et al., Duchane et al., and Hankland.

Ross discloses method of applying coating to a substrate. The method includes providing a base, i.e. deposition substrate, constructed from disposable material such as water transfer type paper, which would dissolve in water. The base is coated with such materials that are metallic, reflective, holographic, or retroreflective, i.e. an optical coating, and includes a release coating, i.e. release system, such as water slide coating

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that will dissolve in water (column 9, line 66 - column 10, line 3; column 5, lines 41-63; column 18, lines 47-67; column 19, line 30; column 28, lines 38-39). An adhesive, i.e. bonding element, is applied to one surface of the coating for attachment of the coating from a base to a final or intermediate surface by heat and pressure (column 43, lines 35-43). If the coating is applied to the intermediate surface, the intermediate surface is used to reverse the orientation of the coating during transportation or transposition onto the final surface and the intermediate surface includes a transfer tape (column 38, lines 8-10). The final surface includes brass, plaques, glass, or brick (column 23, lines 19-23; column 38, lines 1-22). It should be noted that Ross teaches two different release systems to accomplish the step of transferring an optical coating.

According to Applicant's specification, a release-and-transfer structure may be a polymeric releasable adhesive tape (paragraph 0013).

Ross teaches that coatings, known as release coatings, may be used (column 38, lines 21-22). Ross does not specifically teach a first release coating on a base which dissolves in water, however, Withington et al. teach using a backing with a water-soluble coating in a transfer process in applying a decal (page 3, 1st paragraph; page 4, 3rd paragraph).

It would have been obvious to one having ordinary skill in the art to use a water-soluble coating, such as Withington et al. taught, and one would have been motivated to do so to facilitate complete separation of an optical coating from a base by applying water.

Ross fails to teach an organic deposition substrate. Duchane et al disclose a method of forming a thin metal foil on a polyvinyl alcohol film and the alcohol film and

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metal coating are immersed together in a water bath to dissolve the alcohol film (column 4, lines 37-51; column 5, 34-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a polyvinyl alcohol substrate as taught by Duchane et al. to allow easier dissolution of itself for removal against the optical coating and to provide a 3-dimensional optical coating of any desired shape against the article (column 2, lines 10-12).

Also, Ross does not specifically teach heating and pressing to affixing the coating to the article. Hankland teaches a method of transferring an optical coating, which includes placing an composite of a carrier member with the optical coating and the article to be coated into an autoclave with an adhesive element as a component of the article, then heating and pressing to cure the adhesive (column 3, lines 16-22, lines 43-46, and lines 54-61; column 4, lines 25-33).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide use an autoclave to affix a metal coating with heating and pressing as disclosed by Hankland to provide a method of coating surface such as curved surfaces in a one step process (column 1, lines 54-57).

Response to Arguments

13. Applicant's arguments with respect to claims 23 and 24, see pages 10-11 in the appeal brief filed July 18, 2007, have been fully considered but they are not persuasive.

With respect to claim 23, Ross clearly teaches two different release systems; where a first release system to reposition a coating is a water slide method (column 19, lines 24-31) and a second release system is a charged surface to temporarily hold a

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coating (column 38, lines 18-22). Furthermore, the sentence "the first release system is dissolvable in a first-release-coating solvent that does not dissolve the second release system" is not stated in the claim, and therefore is not taken into consideration.

With respect to claim 24, Ross teaches an adhesive, i.e. bonding element, applied to one surface of a coating for attachment of the coating from a base to a final surface by heat and pressure (column 43, lines 35-43).

Therefore, Ross teaches the limitations of claims 23 and 24, and the rejections are maintained.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sonya Mazumdar whose telephone number is (571) 272-6019. The examiner can normally be reached on 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Philip Tucker can be reached on (571) 272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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